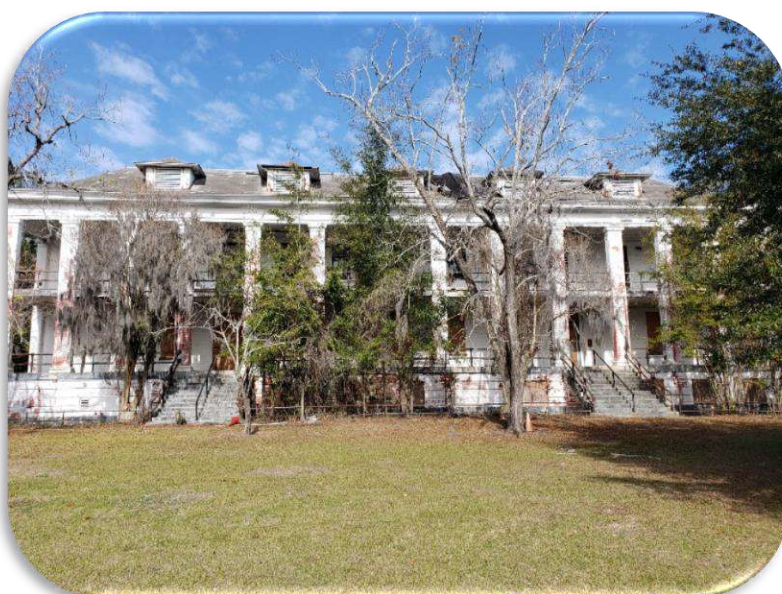


Asbestos and Lead-Based Paint Survey Report

1510 Truxtun Ave.
Old Barracks M17
North Charleston, South Carolina

February 5, 2020
Terracon Project No. EN197470



Prepared for:
Palmetto Railways
Charleston, South Carolina

Prepared by:
Terracon Consultants, Inc.
North Charleston, South Carolina

Inspected by:
Craig C. Langford (SC ASB-22775)

terracon.com

Terracon

Environmental



Facilities



Geotechnical



Materials



February 5, 2020

Palmetto Railways
540 East Bay Street
Charleston, South Carolina 29403

Attn: Alec Thompson
Phone: (843) 737-8440
Email: athompson@palmettorail.com

Re: Asbestos and Lead-Based Paint Survey Report
Old Barracks M17
North Charleston, South Carolina
Terracon Project No. EN197470

Dear Mr. Thompson:

Terracon Consultants, Inc. (Terracon) is pleased to present the results of the limited asbestos and lead-based paint survey performed January 22, 2020, of the building located at 1510 Truxtun Ave in North Charleston, South Carolina. We understand that this survey was requested due to the planned renovation of the building.

Terracon appreciates the opportunity to provide environmental consulting services. If you should have any questions regarding this report, or if you need assistance with bid documents or project oversight during the building renovation, please contact the undersigned at (843) 277-8402.

Sincerely,

Terracon Consultants, Inc.

Andrew Mitroka
Field Scientist

Jeffrey A. Gurrie, CIH
Authorized Project Reviewer

Terracon Consultants, Inc. 1450 Fifth Street, West North Charleston, South Carolina 29405
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Environmental



Facilities



Geotechnical



Materials

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EXECUTIVE SUMMARY

This executive summary is intended as an overview for the convenience of the reader. The report should be reviewed in its entirety prior to making any decisions regarding this site.

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead-based paint survey for the renovation of an approximately 20,000 ft² building located at 1510 Truxtun Avenue in North Charleston, South Carolina. It was our understanding that future plans are to renovate the building. The purpose of this survey was to sample and identify suspect asbestos-containing materials (ACM) and provide information regarding the identity, location, condition and approximate quantities of ACM in interior and exterior building components.

The survey was performed on January 22, 2020, by a South Carolina Department of Health and Environmental Control (SCDHEC) licensed asbestos inspector in general accordance with our proposal dated December 18, 2019, and the sampling protocols established in EPA 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA) and the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects.

One-hundred and sixty-four (164) bulk samples were collected from forty-two (42) homogeneous areas of suspect ACM. Based on the results of laboratory analysis, the following suspect materials were identified as asbestos containing materials (ACMs) defined as containing >1% asbestos:

- Non-friable sheet flooring (10 % Chrysotile) associated with the bathrooms flooring located on the second floor. No mastic was observed in the laboratory analysis. If mastic is observed onsite, it should be assumed to contain asbestos.
- Non-friable floor tile (2% Chrysotile) and floor tile mastic (3% Chrysotile) associated with the 12" x 12" tan floor tile located on the first floor. Floor tile is located underneath carpet in the main room, and one bathroom on the second floor. This material could be located in other areas underneath current finishes.
- Non-friable floor tile mastic (2% Chrysotile) associated with the yellow mastic under the 12" x 12" white floor tile located on the first floor. The floor tile should be considered contaminated since there is no effective way of removing the mastic from the tile.
- The West Side of the building is inaccessible. Suspect floor tile and mastic was observed in the damaged area. The damaged floor tile and mastic is assumed ACM until testing can be performed under safe conditions. All materials in contact with the floor tile is considered ACM by contamination.

Terracon recommends removal of the asbestos-containing materials by a South Carolina licensed asbestos abatement contractor prior disturbance of these materials during renovation of the building. Additionally, third-party air monitoring is required during abatement since the aforementioned non-friable materials are damaged.

Asbestos and Lead-Based Paint Survey Report

1510 Truxton Ave ■ North Charleston, South Carolina

January 2020 ■ Terracon Project No. EN197470

Thirteen (13) paint-chip samples were collected from the components of the structure on the site. Five (5) sample results were above the EPA definition of lead paint of 0.5%. Ten (10) samples were above the SCDHEC 0.06% by weight threshold for disposal.

ASBESTOS AND LEAD-BASED PAINT SURVEY REPORT

1510 TRUXTUN AVENUE

NORTH CHARLESTON, SOUTH CAROLINA

PROJECT NO. EN197470

INSPECTION DATE: JANUARY 22, 2020

REPORT DATE: FEBRUARY 5, 2020

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos and lead-based paint survey of building materials within the building located at 1510 Truxtun Avenue in North Charleston, South Carolina. The survey was conducted on January 22, 2020, by a South Carolina Department of Health and Environmental Control (SCDHEC) licensed building inspector in general accordance with our Proposal No. PEN197470 Rev1 dated December 18, 2019. The purpose of this survey was to sample and identify suspect asbestos-containing materials (ACM) and provide information regarding the identity, location, condition and approximate quantities of ACM in interior and exterior building components.

Terracon understands that the building will be renovated. Environmental Protection Agency (EPA) regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation/demolition activities. NESHAP and SCDHEC requires that potentially regulated asbestos-containing building materials be identified, classified and quantified prior to planned disturbances or demolition activities.

Suspect ACM was sampled in general accordance with the sampling protocols outlined in EPA Regulation 40 CFR 763 Subpart E763.86 (Asbestos Hazard Emergency Response Act, AHERA) and SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. Interior building components were surveyed and homogeneous areas of suspect asbestos-containing materials (ACM) were visually identified and documented. Although reasonable effort was made to survey accessible suspect materials, additional suspect but un-sampled materials could be located in walls, in voids or in other concealed areas. Samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM), as required.

[insert a paragraph on paint testing]

2.0 BUILDING DESCRIPTION

The building is an approximately 20,000 ft² structure. The site consists of a four-story former military barracks building. The structure has a pitched shingle roof. Roofing materials including shingles and felt. Interior finishes include: wallboard systems, plaster walls, lay-in ceiling tiles,

carpeting, floor tiles, and sheet flooring. One exterior HVAC system was located on the north side of the building.

Non-suspect ACMs include fiberglass insulation, rubber/silicon caulking, and ceramic tile.

Suspect ACMs sampled were:

- Wallboard systems (drywall and joint compound)
- Carpet mastic
- Ceiling Tiles
- Floor Tile and Mastics
- Base Board
- Door Gasket
- Window Glazing
- HVAC duct mastic
- Roofing shingles/felt
- Pipe Mastic
- Pipe Tape
- Wire bound Plaster
- Wood bound Plaster
- Window Caulking

3.0 ASBESTOS SURVEY

The asbestos survey was conducted by SCDHEC licensed Asbestos Building Inspector(s) Mr. Craig C. Langford (License No. ASB-22775 Exp. 07/09/20) and Andrew Mitroka (License No. ASB-01871 Exp. 07/16/20). A copy of Mr. Langford's and Mr. Mitroka's license is included in Appendix D. The survey was conducted on January 22, 2020, in general accordance with the sampling protocols established by EPA Regulation 40 CFR 763 Subpart E 763.86, AHERA and SCDHEC R. 61-86.1. A summary of survey activities is provided below.

3.1 Regulatory Overview

An ACM is defined as any material containing asbestos of any type in an amount greater than one percent (1%). The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activity. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non friable ACM includes packing materials, gaskets, resilient floor coverings and asphalt roofing products containing more than 1 percent (%) asbestos. Category II non-friable ACM are non-friable materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could

be crushed or pulverized during anticipated renovation/demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities.

In the state of South Carolina, asbestos activities are regulated by the SCDHEC under the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects. The SCDHEC require that any asbestos-related activity conducted in a public building be performed by personnel licensed by the SCDHEC. The owner or operator must provide the SCDHEC with written notification of planned abatement and removal activities prior to the commencement of those activities. The SCDHEC requires 4 day notification for non-friable projects and 10 day notification for RACM projects. Asbestos abatement must be performed by SCDHEC-licensed asbestos abatement contractors. A SCDHEC-licensed Project Designer shall prepare a written abatement design for each abatement renovation project involving the removal of greater than 3,000 square, 1,500 linear, or 656 cubic feet of RACM. Third-party air monitoring must be conducted during the abatement of friable (regulated) ACM. The SCDHEC asbestos regulations can be found at <http://www.scdhec.gov>.

The Occupational Safety and Health Administration (OSHA) Asbestos Standard for Construction Industry (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc) for an eight-hour time weighted average. The OSHA standard classifies construction and maintenance activities, which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. A full copy of the OSHA asbestos standard for general industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

3.2 Visual Assessment

Our survey activities began with visual observation of the exterior and interior of the building to identify apparent homogeneous areas of suspect ACM. A homogeneous area consists of building materials, which appear similar throughout in terms of color, texture and date of application. Building materials which were not identified as concrete, glass, wood, masonry, metal or rubber were considered suspect ACM.

Terracon lifted floor coverings in several areas, where possible, and did not observe additional flooring layers unless mentioned in this report; however, as Terracon could not assess beneath all floor covering in all areas, there may be isolated areas of additional suspect material present beneath existing flooring.

3.3 Physical Assessment

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material, which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

3.4 Sample Collection

Based on our observations, bulk samples of suspect ACMs were collected in general accordance with SCDHEC and EPA sample collection protocols. Random samples of suspect materials were collected in each homogeneous area. Bulk samples were collected using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

The selection of sample locations and frequency of sampling was based on Terracon's observations and the assumption that like materials in the same area are homogeneous in content.

A summary of the suspect ACM samples collected during the survey is presented in Table 1 in Appendix A. Sample locations are depicted on a Figure 1 in Appendix B.

3.5 Sample Analysis

Bulk samples were submitted under chain of custody to EMSL Analytical Laboratories in Pineville, North Carolina for analysis by Polarized Light Microscopy (PLM) with dispersion staining techniques per EPA EPA/600/R-93/116. The percentage of asbestos, where applicable, was determined by microscopical visual estimation. EMSL is accredited under the National Voluntary Laboratory Accreditation Program NVLAP.

Per the SCDHEC Regulation 61-86.1 Standards of Performance for Asbestos Projects, negative results for non-friable organically bound (NOB) materials such as flooring and roofing shall be verified with at least one TEM analysis. The additional analysis was performed by TEM in accordance with EPA/600/R-93/116 Section 2.5.5.1.

3.6 Findings and Recommendations

One-hundred and sixty-eight (168) bulk samples were collected from forty-two (42) homogeneous areas of suspect ACM. Table 1 in the Appendix A summarizes the results of the visual inspection, estimated quantities, and laboratory analyses. A site diagram with sample locations (Figure 1) is included in Appendix B. Asbestos laboratory analytical reports, certificates of analysis with the chain of custody, are included in Appendix C. Based on the results of laboratory analysis, the following materials were identified as asbestos containing materials (ACMs) defined as containing >1% asbestos.

- Non-friable sheet flooring (10 % Chrysotile) associated with the bathrooms flooring located on the second floor. No mastic was observed in the laboratory analysis. If mastic is observed onsite, it should be assumed to contain asbestos.
- Non-friable floor tile (2% Chrysotile) and floor tile mastic (3% Chrysotile) associated with the 12" x 12" tan floor tile located on the first floor. Floor tile is located underneath carpet in

the main room, and one bathroom on the second floor. This material could be located in other areas underneath current finishes.

- Non-friable floor tile mastic (2% Chrysotile) associated with the yellow mastic under the 12" x 12" white floor tile located on the first floor. The floor tile should be considered contaminated since there is no effective way of removing the mastic from the tile.
- The West Side of the building is inaccessible. Suspect floor tile and mastic was observed in the damaged area. The damaged floor tile and mastic is assumed ACM until testing can be performed under safe conditions. All materials in contact with the floor tile is considered ACM by contamination.

If the ACMs listed above will be disturbed during renovation activities, they should be handled in accordance with the applicable OSHA standards and SCDHEC regulation 61-86.1 – Standards of Performance for Asbestos Projects. Written notification must be submitted to SCDHEC ten (10) business days prior to the renovation or demolition activities. Additionally, third-party air monitoring is required during abatement since the aforementioned non-friable materials are damaged.

If load-bearing walls are scheduled to be removed as part of this renovation project, a SCDHEC demolition permit is required. A copy of this report must be submitted to SCDHEC (Asbestos Section) at least ten (10) working days prior to demolition of load-bearing walls along with a demolition permit application and associated fees. Once processed SCDHEC will issue a permit. Federal, state and local regulations should be referred to in order to verify compliance before any actions are initiated on an ACM.

In accordance with OSHA's Asbestos Standard, the employer shall notify affected employees and contractors of the presence and location of asbestos-containing materials and test results. A full copy of the OSHA asbestos standard for general industry may be found at OSHA's website (www.osha.gov) and should be referenced for specific information.

It should be noted that suspect materials, other than those identified during the January 22, 2020 survey may exist within the structure. Should suspect materials other than those which were identified during this survey be uncovered during or prior to the abatement and demolition process, those materials should be assumed asbestos-containing until sampling and analysis can confirm or refute their asbestos content. Should future sampling indicate that the other material is asbestos containing, Terracon recommends removal of the asbestos-containing materials by a South Carolina licensed asbestos abatement contractor prior to renovation/demolition of the building.

4.0 LEAD-BASED PAINT SURVEY

4.1 Regulatory Overview

Lead is regulated by the EPA, SCDHEC and OSHA. The EPA and SCDHEC regulate lead use, removal, and disposal, and OSHA regulates lead exposure to workers. The EPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 mg/cm², 5,000 mg/kg, or 0.5% by dry weight as determined by laboratory analysis. The SCDHEC regulations 61-107.19 require that painted demolition debris with a lead concentration greater than 0.06% by weight be disposed in a permitted Class II landfill. For the purpose of the OSHA lead standard, lead includes metallic lead, all inorganic lead compounds, and organic lead soaps. The complete OSHA standard for compliance can be found on OSHA's website (www.osha.gov). A synopsis of the OSHA regulations (29 CFR 1926.62) and the applicability are as follows:

The OSHA *Lead Standard for Construction* (29 CFR 1926.62) applies to all construction work where an employee may be occupationally exposed to lead. All work related to construction, alteration, or repair (including painting and decorating) is included. The lead-in-construction standard applies to any detectable concentration of lead in paint, as even small concentrations of lead can result in unacceptable employee exposures depending upon on the method of removal and other workplace conditions. Under this standard, construction includes, but is not limited to, the following:

- Demolition or salvage of structures where lead or materials containing lead are present
- Removal or encapsulation of materials containing lead
- New construction, alteration, repair, or renovation of structures, substrates, or portions containing lead, or materials containing lead
- Installation of products containing lead
- Lead contamination/emergency clean-up
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed
- Maintenance operations associated with construction activities described above

4.2 Sampling and Analytical Protocol

Mr. Langford of Terracon conducted the lead-based paint (LBP) sampling on January 22, 2020. The LBP sampling was conducted by collecting paint chip samples. The paint chip samples were collected from painted or lacquered surfaces of building components likely to contain LBP, based on apparent date of application. The paint samples were collected down to the surface substrate so as to include any underlying paint systems in the analysis. The random paint chip samples were selected based on current paint schemes and may not be inclusive of old paint systems covered with paneling, or existing painted systems. The paint chip samples were submitted to an ELAP accredited laboratory for analysis of lead by NIOSH Method 7082M (atomic absorption).

4.3 Findings and Recommendations

Thirteen (13) paint-chip samples were collected from the components of the structure on the site. Five (5) sample results were above the EPA definition of lead paint of 0.5%. Ten (10) samples were above the SCDHEC 0.06% by weight threshold for disposal. All paints at this site should be considered lead-containing.

Painted demolition debris may be disposed in a C&D Landfill. SCDHEC regulations require that the lead painted demolition debris be disposed in a permitted Class II landfill. Landfills should be contacted to determine their specific disposal requirements. Metal components painted with lead-based paint may be recycled; however, the recycler should be contacted to determine their specific requirements. A summary of the lead paint laboratory results is presented in Table 2 in Appendix A. The analytical report is included in Appendix B

5.0 LIMITATIONS / GENERAL COMMENTS

This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the renovation areas. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date.

This report has been prepared on behalf of and exclusively for use by Palmetto Rail for specific application to their project as discussed. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, express or implied is made.

This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary.

APPENDIX A

TABLES

TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
OLD BARRACKS M17
OLD HOSPITAL DISTRICT - OLD NAVY BASE
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)			
3-PM-01	3rd Floor	PLM	Non-Detected	Pipe Mastic	1	Miscellaneous	Friable / Poor Condition	500 Linear ft.			
3-PM-02	3rd Floor	PLM	Non-Detected								
3-PM-03	3rd Floor	TEM	Non-Detected								
3-PM2-01	3rd Floor	PLM	Non-Detected	Pipe Mastic	2	Miscellaneous	Friable / Poor Condition	1,500 Linear ft.			
3-PM2-02	3rd Floor	PLM	Non-Detected								
3-PM2-03	3rd Floor	TEM	Non-Detected								
3-CT-01	3rd Floor	PLM	Non-Detected	White Ceiling Tile	3	Miscellaneous	Friable / Poor Condition	1,300 Linear ft.			
3-CT-02	3rd Floor	PLM	Non-Detected								
3-CT-03	3rd Floor	PLM	Non-Detected								
3-DT-01	3rd Floor	PLM	Non-Detected	Duct Tape - Wrap	4	TSI	Friable / Poor Condition	500 Linear ft.			
3-DT-02	3rd Floor	PLM	Non-Detected								
3-DT-03	3rd Floor	PLM	Non-Detected								
3-DT-01	3rd Floor	PLM	Non-Detected	Duct Tape - Insulation	5						
3-DT-02	3rd Floor	PLM	Non-Detected								
3-DT-03	3rd Floor	PLM	Non-Detected								
3-FT-01	3rd Floor	PLM	Non-Detected	Gray Floor Tile	6	Miscellaneous	Non-Friable / Poor Condition	1,000 SF			
3-FT-02	3rd Floor	PLM	Non-Detected								
3-FT-03	3rd Floor	TEM	Non-Detected								
3-FT-01	3rd Floor	PLM	Non-Detected	Gray Floor Tile Mastic	7						
3-FT-02	3rd Floor	PLM	Non-Detected								
3-FT-03	3rd Floor	TEM	Non-Detected								
3-DWJC-01	3rd Floor	PLM	Non-Detected	Drywall	8	Miscellaneous	Non-Friable / Poor Condition	4500 SF			
3-DWJC-02	3rd Floor	PLM	Non-Detected								
3-DWJC-03	3rd Floor	PLM	Non-Detected								
3-DWJC-04	3rd Floor	PLM	Non-Detected								
3-DWJC-05	3rd Floor	PLM	Non-Detected								
3-DWJC-01	3rd Floor	PLM	Non-Detected	Joint Compound	9						
3-DWJC-02	3rd Floor	PLM	Non-Detected								
3-DWJC-03	3rd Floor	PLM	Non-Detected								
3-DWJC-04	3rd Floor	PLM	Non-Detected								
3-DWJC-05	3rd Floor	PLM	Non-Detected								
3-CM-01	3rd Floor	PLM	Non-Detected	Carpet Mastic	10	Miscellaneous	Non-Friable / Poor Condition	2000 SF			
3-CM-02	3rd Floor	PLM	Non-Detected								
3-CM-03	3rd Floor	TEM	Non-Detected								
2-CBM-01	2nd Floor	PLM	Non-Detected	Cove Base Mastic	11	Miscellaneous	Non-Friable / Poor Condition	500 Linear ft.			
2-CBM-02	2nd Floor	PLM	Non-Detected								
2-CBM-03	2nd Floor	TEM	Non-Detected								

**TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
OLD BARRACKS M17
OLD HOSPITAL DISTRICT - OLD NAVY BASE
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470**

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
2-CT-01	2nd Floor	PLM	Non-Detected	Ceiling Tile	12	Miscellaneous	Friable / Poor Condition	8,000 SF
2-CT-02	2nd Floor	PLM	Non-Detected					
2-CT-03	2nd Floor	PLM	Non-Detected					
2-DT-01	2nd Floor	PLM	Non-Detected	Duct Tape	13	TSI	Friable / Poor Condition	500 Linear ft.
2-DT-02	2nd Floor	PLM	Non-Detected					
2-DT-03	2nd Floor	TEM	Non-Detected					
2-CM-01	2nd Floor	PLM	Non-Detected	Yellow Carpet Mastic	14	Miscellaneous	Non-Friable / Poor Condition	2,500 SF
2-CM-02	2nd Floor	PLM	Non-Detected					
2-CM-03	2nd Floor	TEM	Non-Detected					
2-SF-01	2nd Floor	PLM	10 % Chrysotile	Sheet Flooring - Bathrooms	15	Miscellaneous	Non-Friable / Poor Condition	350 SF
2-SF-02	2nd Floor	PLM	10 % Chrysotile					
2-SF-03	2nd Floor	TEM	Pos. Stop					
2-FT-01	2nd Floor	PLM	Non-Detected	Beige Floor Tile	16	Miscellaneous	Non-Friable / Poor Condition	1500 SF
2-FT-02	2nd Floor	PLM	Non-Detected					
2-FT-03	2nd Floor	TEM	Non-Detected					
2-FT-01	2nd Floor	PLM	Non-Detected	Mastic	17	Miscellaneous	Non-Friable / Poor Condition	1500 SF
2-FT-02	2nd Floor	PLM	Non-Detected					
2-FT-03	2nd Floor	TEM	Non-Detected					
2-DWJC-01	2nd Floor	PLM	Non-Detected	Drywall	18	Miscellaneous	Non-Friable / Poor Condition	10,000 SF
2-DWJC-02	2nd Floor	PLM	Non-Detected					
2-DWJC-03	2nd Floor	PLM	Non-Detected					
2-DWJC-04	2nd Floor	PLM	Non-Detected					
2-DWJC-05	2nd Floor	PLM	Non-Detected					
2-DWJC-06	2nd Floor	PLM	Non-Detected					
2-DWJC-07	2nd Floor	PLM	Non-Detected	Joint Compound	19	Miscellaneous	Non-Friable / Poor Condition	10,000 SF
2-DWJC-01	2nd Floor	PLM	Non-Detected					
2-DWJC-02	2nd Floor	PLM	Non-Detected					
2-DWJC-03	2nd Floor	PLM	Non-Detected					
2-DWJC-04	2nd Floor	PLM	Non-Detected					
2-DWJC-05	2nd Floor	PLM	Non-Detected					
2-DWJC-06	2nd Floor	PLM	Non-Detected					
2-DWJC-07	2nd Floor	PLM	Non-Detected					
P1-01	Throughout Building Ceiling	PLM	Non-Detected	Wire Bound Plaster	20	Miscellaneous	Non-Friable / Poor Condition	8,000 SF
P1-02	Throughout Building Ceiling	PLM	Non-Detected					
P1-03	Throughout Building Ceiling	PLM	Non-Detected					
P1-04	Throughout Building Ceiling	PLM	Non-Detected					
P1-05	Throughout Building Ceiling	PLM	Non-Detected					
P1-06	Throughout Building Ceiling	PLM	Non-Detected					
P1-07	Throughout Building Ceiling	PLM	Non-Detected					
P1-08	Throughout Building Ceiling	PLM	Non-Detected					
P1-09	Throughout Building Ceiling	PLM	Non-Detected					

TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
OLD BARRACKS M17
OLD HOSPITAL DISTRICT - OLD NAVY BASE
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
P2-01	Throughout Building Ceiling	PLM	Non-Detected	Wood bound Plaster	21	Miscellaneous	Non-Friable / Poor Condition	8,000 SF
P2-02	Throughout Building Ceiling	PLM	Non-Detected					
P2-03	Throughout Building Ceiling	PLM	Non-Detected					
P2-04	Throughout Building Ceiling	PLM	Non-Detected					
P2-05	Throughout Building Ceiling	PLM	Non-Detected					
P2-06	Throughout Building Ceiling	PLM	Non-Detected					
P2-07	Throughout Building Ceiling	PLM	Non-Detected					
1-CBM-01	1st Floor	PLM	Non-Detected	Cove Base	22	Miscellaneous	Non-Friable / Poor Condition	1,500 SF
1-CBM-02	1st Floor	PLM	Non-Detected	Mastic	23			
1-CBM-03	1st Floor	TEM	Non-Detected					
1-CBM-01	1st Floor	PLM	Non-Detected	Drywall	24	Miscellaneous	Non-Friable / Poor Condition	8,000 SF
1-CBM-02	1st Floor	PLM	Non-Detected					
1-CBM-03	1st Floor	TEM	Non-Detected					
1-DWJC-01	1st Floor	PLM	Non-Detected					
1-DWJC-02	1st Floor	PLM	Non-Detected					
1-DWJC-03	1st Floor	PLM	Non-Detected					
1-DWJC-04	1st Floor	PLM	Non-Detected					
1-DWJC-05	1st Floor	PLM	Non-Detected					
1-DWJC-06	1st Floor	PLM	Non-Detected					
1-DWJC-07	1st Floor	PLM	Non-Detected					
1-DWJC-01	1st Floor	PLM	Non-Detected	Joint Compound	25			
1-DWJC-02	1st Floor	PLM	Non-Detected					
1-DWJC-03	1st Floor	PLM	Non-Detected					
1-DWJC-04	1st Floor	PLM	Non-Detected					
1-DWJC-05	1st Floor	PLM	Non-Detected					
1-DWJC-06	1st Floor	PLM	Non-Detected					
1-DWJC-07	1st Floor	PLM	Non-Detected					
1-DG-01	1st Floor	PLM	Non-Detected	Tan Layer Gasket	26	Miscellaneous	Non-Friable / Poor Condition	15 Linear ft.
1-DG-02	1st Floor	PLM	Non-Detected	Brown Layer Gasket	27	Miscellaneous	Non-Friable / Poor Condition	
1-DG-03	1st Floor	TEM	Non-Detected					
1-DG-01	1st Floor	PLM	Non-Detected					
1-DG-02	1st Floor	PLM	Non-Detected	12" x 12" Tan Floor Tile	28	Miscellaneous	Non-Friable / Poor Condition	1,000 SF
1-DG-03	1st Floor	TEM	Non-Detected					
1-FT1-01	1st Floor Main Room	PLM	2 % Chrysotile					
1-FT1-02	1st Floor Main Room	PLM	2 % Chrysotile	Black Mastic under 12" x 12" Tan Floor Tile	29			
1-FT1-03	1st Floor Main Room	TEM	Pos. Stop					
1-FT1-01	1st Floor Main Room	PLM	2 % Chrysotile					
1-FT1-02	1st Floor Main Room	PLM	3 % Chrysotile					
1-FT1-03	1st Floor Main Room	TEM	Pos. Stop					

TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
OLD BARRACKS M17
OLD HOSPITAL DISTRICT - OLD NAVY BASE
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)
1-FT2-01	1st Floor Main Room	PLM	Non-Detected	12" x 12" White Tile	30	Miscellaneous	Non-Friable / Poor Condition	500 SF
1-FT2-02	1st Floor Main Room	PLM	Non-Detected					
1-FT2-03	1st Floor Main Room	TEM	Non-Detected					
1-FT2-01	1st Floor Main Room	PLM	2 % Chrysotile	Yellow Mastic under 12" x 12" White Tile	31			
1-FT2-02	1st Floor Main Room	PLM	2 % Chrysotile					
1-FT2-03	1st Floor Main Room	TEM	Pos. Stop					
1-CT-01	1st Floor	PLM	Non-Detected	White Ceiling Tile	32	Miscellaneous	Non-Friable / Poor Condition	8,000 SF
1-CT-02	1st Floor	PLM	Non-Detected					
1-CT-03	1st Floor	PLM	Non-Detected					
1-WG-01	1st Floor	PLM	Non-Detected	Beige Window Glazing	33	Miscellaneous	Friable / Poor Condition	500 Linear ft.
1-WG-02	1st Floor	PLM	Non-Detected					
1-WG-03	1st Floor	TEM	Non-Detected					
1-WC-01	1st Floor	PLM	Non-Detected	Window Caulking	34	Miscellaneous	Non-Friable / Poor Condition	500 Linear ft.
1-WC-02	1st Floor	PLM	Non-Detected					
1-WC-03	1st Floor	TEM	Non-Detected					
B-WBJC-01	Basement	PLM	Non-Detected	Drywall	35	Miscellaneous	Non-Friable / Poor Condition	5,000 SF
B-WBJC-02	Basement	PLM	Non-Detected					
B-WBJC-03	Basement	PLM	Non-Detected					
B-WBJC-04	Basement	PLM	Non-Detected					
B-WBJC-05	Basement	PLM	Non-Detected					
B-WBJC-06	Basement	PLM	Non-Detected					
B-WBJC-07	Basement	PLM	Non-Detected					
B-WBJC-01	Basement	PLM	Non-Detected	Joint Compound	36	Miscellaneous	Non-Friable / Poor Condition	
B-WBJC-02	Basement	PLM	Non-Detected					
B-WBJC-03	Basement	PLM	Non-Detected					
B-WBJC-04	Basement	PLM	Non-Detected					
B-WBJC-05	Basement	PLM	Non-Detected					
B-WBJC-06	Basement	PLM	Non-Detected					
B-WBJC-07	Basement	PLM	Non-Detected					
B-FT-01	Basement	PLM	Non-Detected	Gray Floor Tile	37	Miscellaneous	Non-Friable / Poor Condition	2,000 SF
B-FT-02	Basement	PLM	Non-Detected					
B-FT-03	Basement	TEM	Non-Detected					
B-FT-01	Basement	PLM	Non-Detected	Tan Mastic	38			
B-FT-02	Basement	PLM	Non-Detected					
B-FT-03	Basement	TEM	Non-Detected					

TABLE 1
ASBESTOS RESULTS SAMPLE SUMMARY
OLD BARRACKS M17
OLD HOSPITAL DISTRICT - OLD NAVY BASE
NORTH CHARLESTON, SOUTH CAROLINA
TERRACON PROJECT NO. EN197470

Sample Number	Sample Location	Analysis Method	Analytical Results	Sample Description	HA	Classification	Friable/Non-Friable & Current Condition	Estimated Quantity (Square Feet)			
B-CT-01	Basement	PLM	Non-Detected	White Ceiling Tile	39	Miscellaneous	Friable / Poor Condition	2,000 SF			
B-CT-02	Basement	PLM	Non-Detected								
B-CT-03	Basement	PLM	Non-Detected								
B-PM3-01	Basement	PLM	Non-Detected	Pipe Mastic	40	Miscellaneous	Friable / Poor Condition	500 Linear ft.			
B-PM3-02	Basement	PLM	Non-Detected								
B-PM3-03	Basement	TEM	Non-Detected								
R-01	Roof	PLM	Non-Detected	Roof Shingle	41	Miscellaneous	Non-Friable / Poor Condition	8,000 SF			
R-02	Roof	PLM	Non-Detected								
R-03	Roof	TEM	Non-Detected								
R-01	Roof	PLM	Non-Detected	Roof Felt	42						
R-02	Roof	PLM	Non-Detected								
R-03	Roof	TEM	Non-Detected								
1) Bold and shaded items are identified ACMs 2) Quantities listed above are estimates to be used for inspection purposes only and should be field-verified for all other uses. 3) Quantities listed above should not be used in construction documents or bids											
HA - Homogeneous Area PLM - Polarized Light Microscopy TEM - Transmission Electron Microscopy				SF - Square Feet LF - Linear Feet							

APPENDIX B
SITE DIAGRAM WITH SAMPLE LOCATIONS



PM:	CCL
Drawn By:	AJM
Checked By:	JAG
Approved By:	JAG

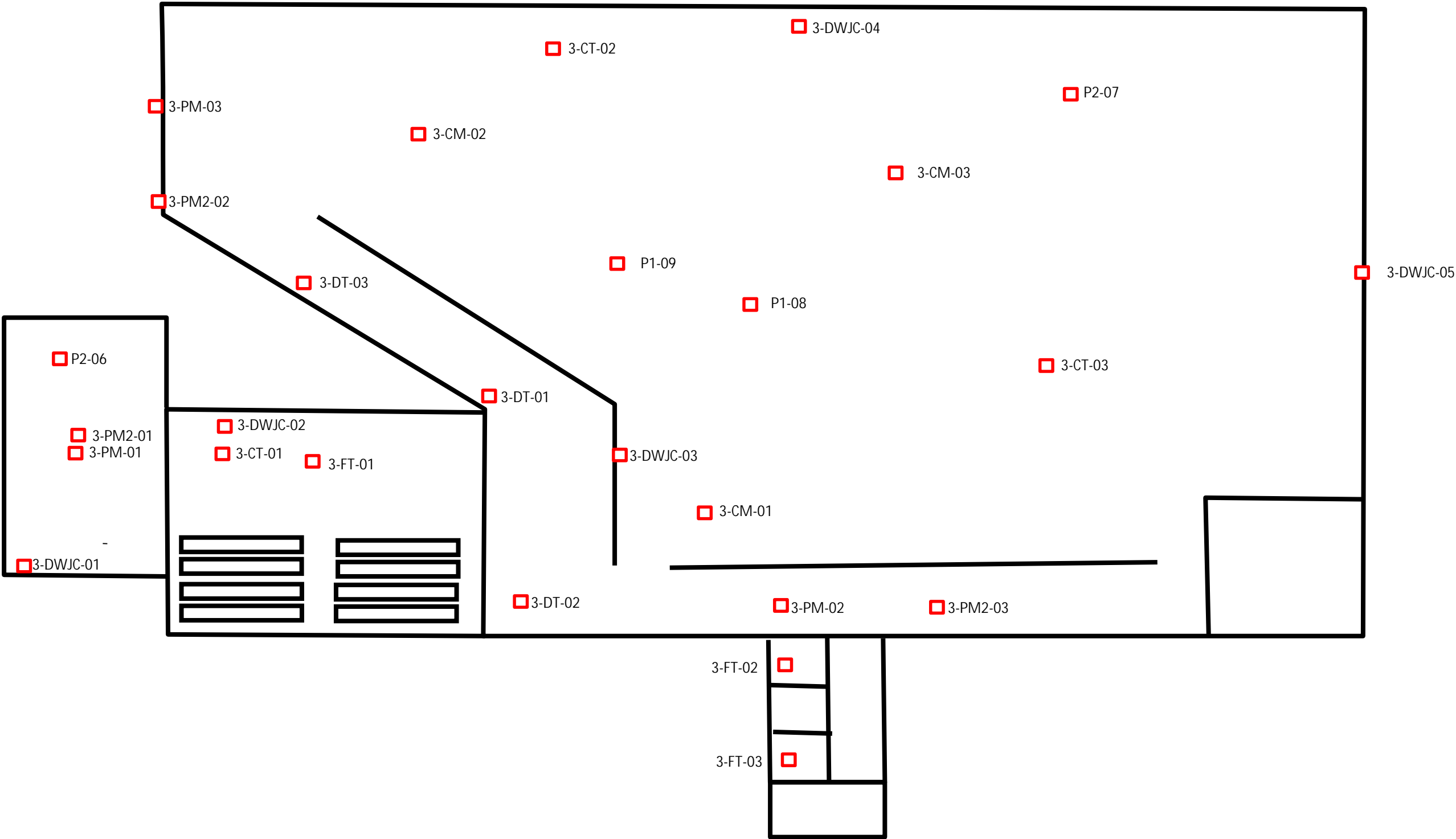
Project No.	EN197470
Scale:	N.T.S
File Path:	
Date:	01/30/20

Terracon	
1450 Fifth Street, West	North Charleston, SC 29405
Phone: (843) 884 1234	Fax: (843) 884 9234

Site Location Diagram
Old Barrack M17 Charleston, South Carolina
Charleston County South Carolina

EXHIBIT NO.
1

3rd Floor



N

Legend

Asbestos Sample (Negative)

Asbestos Sample (Positive)

Sample locations are approximated

PM:	CL	Project No.	EN197470
Drawn By:	AJM	Scale:	N.T.S
Checked By:	JAG	File Path:	
Approved By:	JAG	Date:	1/22/20

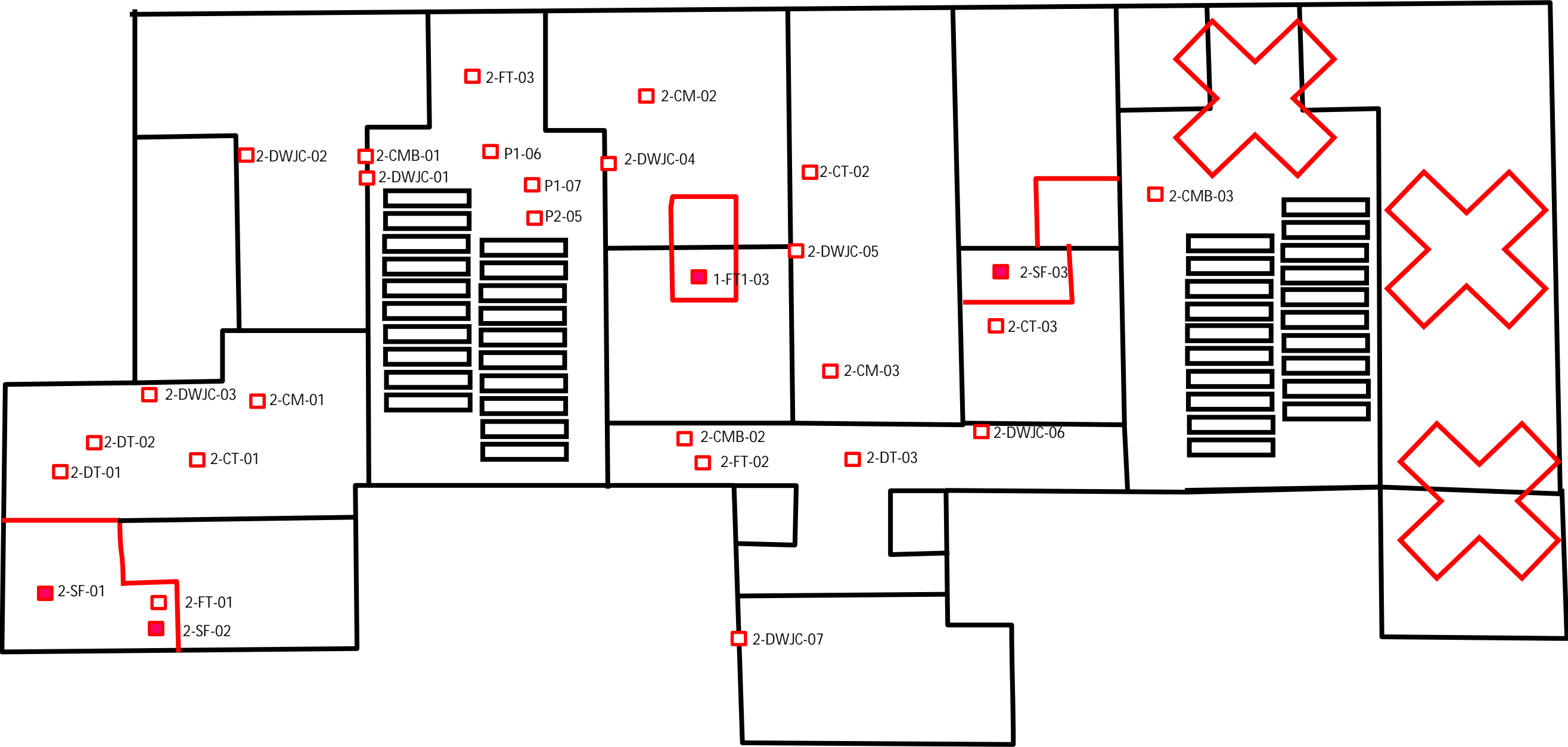
Terracon

1450 Fifth Street, WestNorth Charleston, SC 29405

Phone: (843) 884 1234Fax: (843) 884 9234

Approximate Sample Location Diagram		EXHIBIT NO.
Hospital District Military Barracks M17 Charleston, South Carolina		2
Charleston County		South Carolina

2nd Floor



Legend

- Asbestos Sample (Negative)
- Asbestos Sample (Positive)

Sample locations are approximated

PM:	CL
Drawn By:	AJM
Checked By:	JAG
Approved By:	JAG

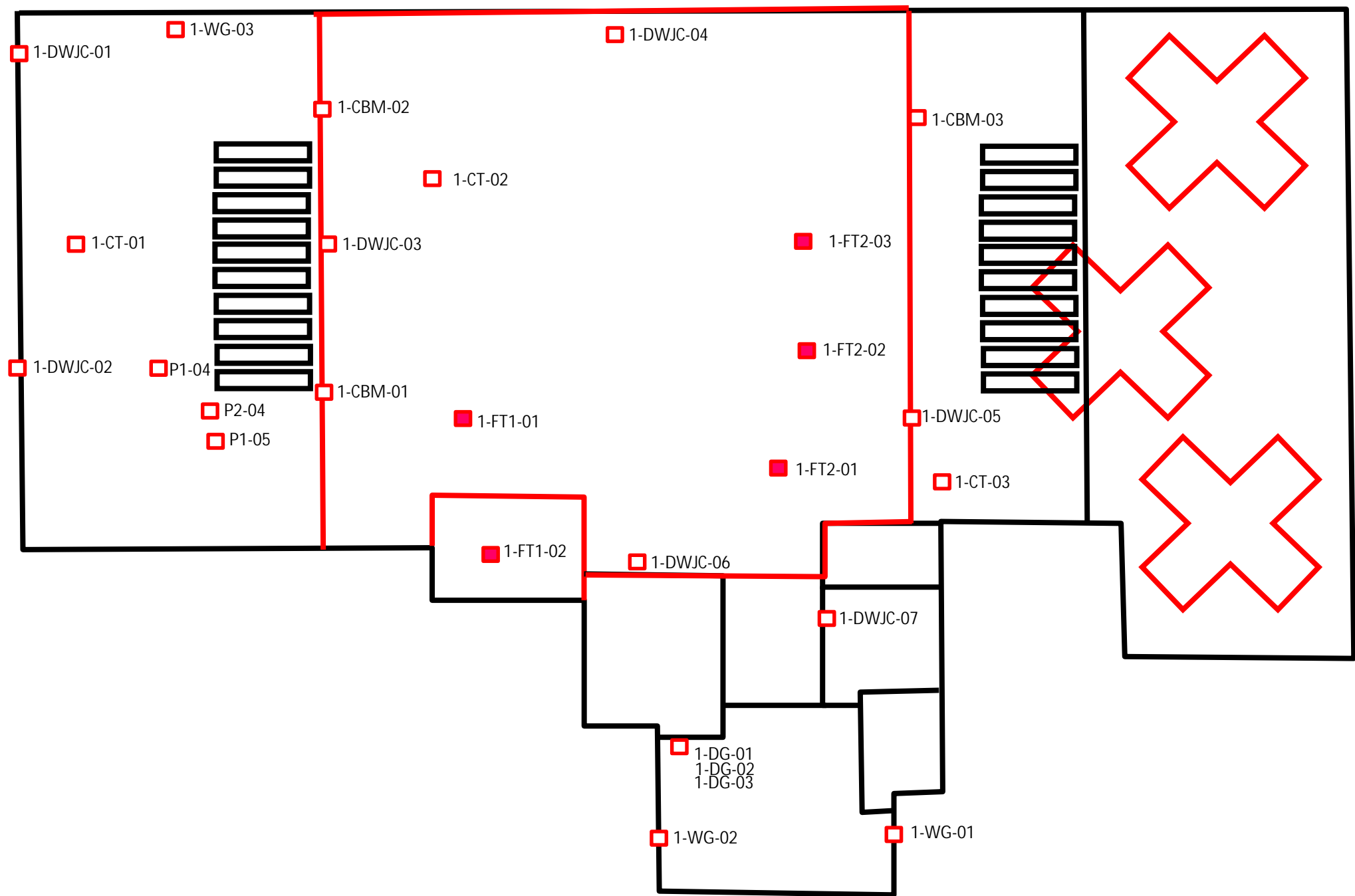
Project No.	EN197470
Scale:	N.T.S.
File Path:	
Date:	1/22/20

Terracon	
1450 Fifth Street, West	North Charleston, SC 29405
Phone: (843) 884 1234	Fax: (843) 884 9234

Approximate Sample Location Diagram	
Hospital District Military Barracks M17 Charleston, South Carolina	
Charleston County	South Carolina

EXHIBIT NO.
2a

1st Floor



N
↓

Legend

- ☐ Asbestos Sample (Negative)
☒ Asbestos Sample (Positive)

Sample locations are approximated

PM:	CL
Drawn By:	AJM
Checked By:	JAG
Approved By:	JAG

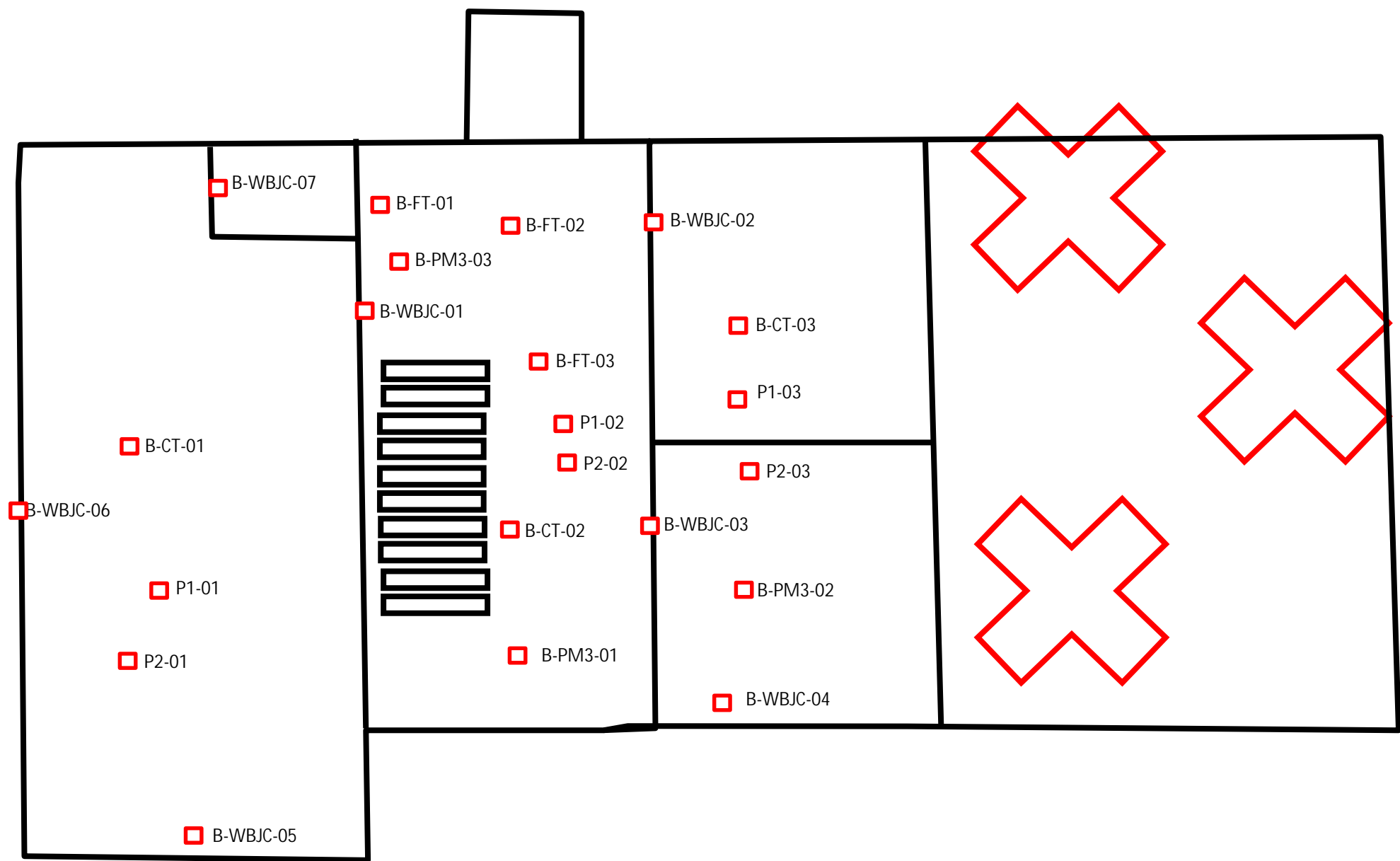
Project No.	EN197470
Scale:	N.T.S
File Path:	
Date:	1/22/20



1450 Fifth Street, West	North Charleston, SC 29405
Phone: (843) 884 1234	Fax: (843) 884 9234

Approximate Sample Location Diagram		EXHIBIT NO.
Hospital District Military Barracks M17 Charleston, South Carolina		2b
Charleston County	South Carolina	

Basement



Legend

-  Asbestos Sample (Negative)
-  Asbestos Sample (Positive)

Sample locations are approximated

PM:	CL
Drawn By:	AJM
Checked By:	JAG
Approved By:	JAG

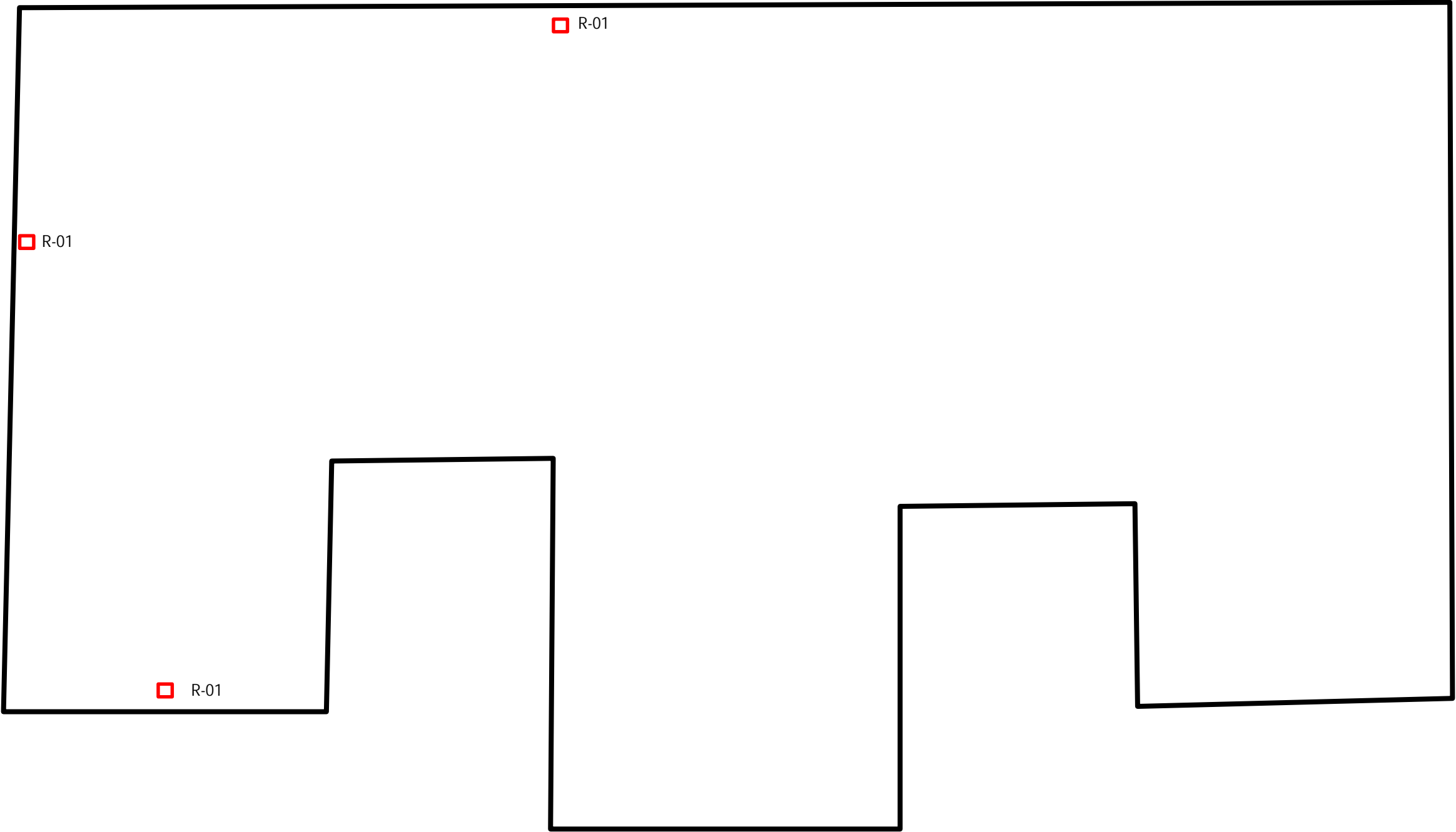
Project No.	EN197470
Scale:	N.T.S
File Path:	
Date:	1/22/20

	
1450 Fifth Street, West	North Charleston, SC 29405
Phone: (843) 884 1234	Fax: (843) 884 9234

Approximate Sample Location Diagram	
Hospital District Military Barracks M17 Charleston, South Carolina	
Charleston County	South Carolina

EXHIBIT NO.
2c

Roof



Legend

-  Asbestos Sample (Negative)
-  Asbestos Sample (Positive)

Sample locations are approximated

PM:	CL
Drawn By:	AJM
Checked By:	JAG
Approved By:	JAG

Project No.	EN197470
Scale:	N.T.S
File Path:	
Date:	1/22/20

	
1450 Fifth Street, West	North Charleston, SC 29405
Phone: (843) 884 1234	Fax: (843) 884 9234

Approximate Sample Location Diagram	
Hospital District Military Barracks M17 Charleston, South Carolina	
Charleston County	South Carolina

EXHIBIT NO.
2d



#1 View of Old Barrack M17



#2 View of HA-01 and HA-02: Pipe Mastic



#3 View of HA-03: Ceiling Tile



#4 View of HA-04 and HA-05: Duct Tape



#5 View of HA-06 and HA-07: Floor Tile



#6 View of Old HA-08 HA-09: DWJC



#7 View of HA-10: Carpet Mastic



#8 View of HA-11 Base Mastic



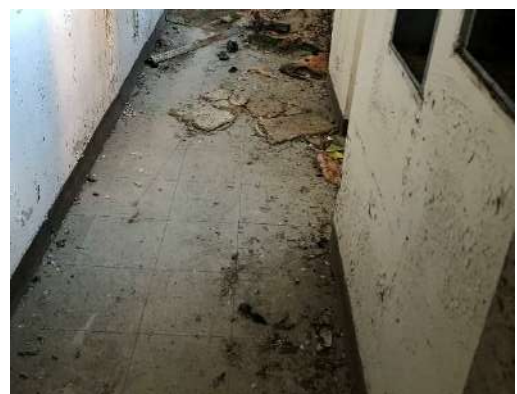
#9 View of HA-12, 13: Ceiling Tile & Duct



#10 View of HA-14: Carpet Mastic



#11 View of HA-15: Sheet Flooring



#12 View of HA-16, 17: Floor Tile & Mastic



#13 View of HA-18,19: DWJC



#14 View of HA-20 Wire-bound Plaster



#15 View of HA-21: Wood-bound Plaster



#16 View of HA-22,23: Cove Base & Mastic



#17 View of HA-24,25: DWJC



#18 View of HA-26,27: Door Gasket



#25 View of HA-39: Ceiling Tile



#26 View of HA-40 Pipe Mastic



#27 View of HA-41,42: Roof Shingle & Felt

APPENDIX D
LABORATORY REPORTS



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Attention: Craig Langford

Terracon, Inc.

1450 Fifth Street West

North Charleston, SC 29405

Phone: (843) 442-6658

Fax: (843) 884-9234

Received Date: 01/23/2020 11:40 AM

Analysis Date: 01/23/2020 - 01/27/2020

Collected Date: 01/22/2020

Project: EN197470 M17 Old Barracks

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-PM2-01 412000722-0001	3rd Floor - Pipe Mastic	White Non-Fibrous Homogeneous	5% Glass 10% Wollastonite	5% Ca Carbonate 80% Non-fibrous (Other)	None Detected
3-PM2-02 412000722-0002	3rd Floor - Pipe Mastic	White Non-Fibrous Homogeneous	5% Glass 2% Fibrous (Other)	5% Ca Carbonate 88% Non-fibrous (Other)	None Detected
3-PM-01 412000722-0003	3rd Floor - Pipe Mastic	White Non-Fibrous Homogeneous	5% Glass 10% Wollastonite	5% Ca Carbonate 80% Non-fibrous (Other)	None Detected
3-PM-02 412000722-0004	3rd Floor - Pipe Mastic	White Non-Fibrous Homogeneous	5% Glass 10% Wollastonite	85% Non-fibrous (Other)	None Detected
3-CT-01 412000722-0005	White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 15% Min. Wool	10% Perlite 15% Non-fibrous (Other)	None Detected
3-CT-02 412000722-0006	White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 15% Min. Wool	10% Perlite 15% Non-fibrous (Other)	None Detected
3-CT-03 412000722-0007	White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 15% Min. Wool	10% Perlite 15% Non-fibrous (Other)	None Detected
3-DT-01-Wrap 412000722-0008	Silver Duct Tape	Tan/Silver Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
3-DT-01-Insulation 412000722-0008A	Silver Duct Tape	Pink Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
3-DT-02-Wrap 412000722-0009	Silver Duct Tape	Tan Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
3-DT-02-Insulation 412000722-0009A	Silver Duct Tape	Pink Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
3-DT-03-Wrap 412000722-0009B	Silver Duct Tape	Tan/Silver Fibrous Heterogeneous	70% Cellulose 5% Glass	25% Non-fibrous (Other)	None Detected
3-DT-03-Insulation 412000722-0009C	Silver Duct Tape	Pink Fibrous Homogeneous	99% Glass	1% Non-fibrous (Other)	None Detected
3-FT-01-Floor Tile 412000722-0010	Gray Floor Tile with Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
3-FT-01-Mastic 412000722-0010A	Gray Floor Tile with Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
3-FT-02-Floor Tile 412000722-0011	Gray Floor Tile with Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected

Initial report from: 01/27/2020 10:58:39



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-FT-02-Mastic 412000722-0011A	Gray Floor Tile with Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-DWJC-01-Drywall 412000722-0012	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
3-DWJC-01-Joint Compound 412000722-0012A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
3-DWJC-02-Drywall 412000722-0013	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
3-DWJC-02-Joint Compound 412000722-0013A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
3-DWJC-03-Drywall 412000722-0014	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
3-DWJC-03-Joint Compound 412000722-0014A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
3-DWJC-04-Drywall 412000722-0015	Drywall and Joint Compound	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
3-DWJC-04-Joint Compound 412000722-0015A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
3-DWJC-05-Drywall 412000722-0016	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
3-DWJC-05-Joint Compound 412000722-0016A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
3-CM-01 412000722-0017	Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-CM-02 412000722-0018	Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-CBM-01 412000722-0019	Cut Board and Mastic	Brown Non-Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
2-CBM-02 412000722-0020	Cut Board and Mastic	Brown Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
2-CT-01 412000722-0021	2nd Floor - Ceiling Tile	Gray/White Non-Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected
2-CT-02 412000722-0022	2nd Floor - Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool	15% Perlite 5% Non-fibrous (Other)	None Detected

Initial report from: 01/27/2020 10:58:39



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-CT-03 412000722-0023	2nd Floor - Ceiling Tile	White Fibrous Homogeneous	50% Cellulose 15% Min. Wool	10% Perlite 25% Non-fibrous (Other)	None Detected
2-DT-01 412000722-0024	Silver Duct Tape	Tan/Silver Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
2-DT-02 412000722-0025	Silver Duct Tape	Tan Non-Fibrous Homogeneous	60% Cellulose 5% Glass	35% Non-fibrous (Other)	None Detected
2-CM-01 412000722-0026	Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-CM-02 412000722-0027	Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-SF-01-Flooring 412000722-0028 No mastic present	Gray Sheet Flooring and Mastic	Gray Fibrous Homogeneous	10% Cellulose	30% Ca Carbonate 50% Non-fibrous (Other)	10% Chrysotile
2-SF-02-Flooring 412000722-0029 No mastic present	Gray Sheet Flooring and Mastic	Gray Fibrous Homogeneous	10% Cellulose	15% Ca Carbonate 65% Non-fibrous (Other)	10% Chrysotile
2-FT-01-Floor Tile 412000722-0030	Beige Floor Tile and Mastic	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-FT-01-Mastic 412000722-0030A	Beige Floor Tile and Mastic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-FT-02-Floor Tile 412000722-0031	Beige Floor Tile and Mastic	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-FT-02-Mastic 412000722-0031A	Beige Floor Tile and Mastic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-DWJC-01-Drywall 412000722-0032	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
2-DWJC-01-Joint Compound 412000722-0032A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-DWJC-02-Drywall 412000722-0033	Drywall and Joint Compound	Gray Non-Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
2-DWJC-02-Joint Compound 412000722-0033A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-DWJC-03-Drywall 412000722-0034	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
2-DWJC-03-Joint Compound 412000722-0034A	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected

Initial report from: 01/27/2020 10:58:39



EMSL Analytical, Inc.

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-DWJC-04-Drywall	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
412000722-0035					
2-DWJC-04-Joint Compound	Drywall and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
412000722-0035A					
2-DWJC-05-Drywall	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
412000722-0036					
2-DWJC-05-Joint Compound	Drywall and Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
412000722-0036A					
2-DWJC-06-Drywall	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
412000722-0037					
2-DWJC-06-Joint Compound	Drywall and Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
412000722-0037A					
2-DWJC-07-Drywall	Drywall and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
412000722-0038					
2-DWJC-07-Joint Compound	Drywall and Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
412000722-0038A					
P1-01	Wire Bound Plaster	Gray Non-Fibrous Homogeneous	1% Cellulose	25% Quartz 5% Ca Carbonate 69% Non-fibrous (Other)	None Detected
412000722-0039					
P1-02	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0040					
P1-03	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0041					
P1-04	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0042					
P1-05	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0043					
P1-06	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0044					
P1-07	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0045					
P1-08	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0046					
P1-09	Wire Bound Plaster	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0047					
P2-01	Wood Bound Plaster	Gray Non-Fibrous Homogeneous	2% Synthetic	25% Quartz 8% Ca Carbonate 65% Non-fibrous (Other)	None Detected
412000722-0048					

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
P2-02 412000722-0049	Wood Bound Plaster	Gray Non-Fibrous Homogeneous	1% Synthetic 2% Hair	25% Quartz 5% Ca Carbonate 67% Non-fibrous (Other)	None Detected
P2-03 412000722-0050	Wood Bound Plaster	Gray Non-Fibrous Homogeneous	2% Hair	25% Quartz 5% Ca Carbonate 68% Non-fibrous (Other)	None Detected
P2-04 412000722-0051	Wood Bound Plaster	Gray Non-Fibrous Homogeneous	1% Cellulose 1% Hair	25% Quartz 10% Ca Carbonate 63% Non-fibrous (Other)	None Detected
P2-05 412000722-0052	Wood Bound Plaster	Gray Non-Fibrous Homogeneous	1% Hair	30% Quartz 5% Ca Carbonate 64% Non-fibrous (Other)	None Detected
P2-06 412000722-0053	Wood Bound Plaster	Gray Non-Fibrous Homogeneous	1% Synthetic 1% Hair	25% Quartz 5% Ca Carbonate 68% Non-fibrous (Other)	None Detected
P2-07 412000722-0054	Wood Bound Plaster	Gray Non-Fibrous Homogeneous	1% Hair	30% Quartz 5% Ca Carbonate 64% Non-fibrous (Other)	None Detected
1-CBM-01-Cove Base 412000722-0055	White Cut Board and Mastic	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-CBM-01-Mastic 412000722-0055A	White Cut Board and Mastic	Tan Non-Fibrous Homogeneous	2% Cellulose	5% Ca Carbonate 93% Non-fibrous (Other)	None Detected
1-CBM-02-Cove Base 412000722-0056	White Cut Board and Mastic	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-CBM-02-Mastic 412000722-0056A	White Cut Board and Mastic	Brown/Tan Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-DWJC-1-Drywall 412000722-0057	Drywall Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
1-DWJC-1-Joint Compound 412000722-0057A	Drywall Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
1-DWJC-2-Drywall 412000722-0058	Drywall Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
1-DWJC-2-Joint Compound 412000722-0058A	Drywall Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
1-DWJC-3-Drywall 412000722-0059	Drywall Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1-DWJC-3-Joint Compound 412000722-0059A	Drywall Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
1-DWJC-4-Drywall 412000722-0060	Drywall Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1-DWJC-4-Joint Compound 412000722-0060A	Drywall Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-DWJC-5-Drywall 412000722-0061	Drywall Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 2% Glass	93% Non-fibrous (Other)	None Detected
1-DWJC-5-Joint Compound 412000722-0061A	Drywall Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
1-DWJC-6-Drywall 412000722-0062	Drywall Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1-DWJC-6-Joint Compound 412000722-0062A	Drywall Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
1-DWJC-7-Drywall 412000722-0063	Drywall Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1-DWJC-7-Joint Compound 412000722-0063A	Drywall Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
1-DG-01-Tan Layer 412000722-0064	Door Gasket	Tan/Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-DG-01-Brown Layer 412000722-0064A	Door Gasket	Brown/Black Non-Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
1-DG-02-Tan Layer 412000722-0065	Door Gasket	Brown/Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-DG-02-Brown Layer 412000722-0065A	Door Gasket	Brown/Black Fibrous Homogeneous	50% Cellulose	50% Non-fibrous (Other)	None Detected
1-FT1-01-Floor Tile 412000722-0066	Tan Tile with Black Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 68% Non-fibrous (Other)	2% Chrysotile
1-FT1-01-Mastic 412000722-0066A	Tan Tile with Black Mastic	Black Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
1-FT1-02-Floor Tile 412000722-0067	Tan Tile with Black Mastic	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 58% Non-fibrous (Other)	2% Chrysotile
1-FT1-02-Mastic 412000722-0067A	Tan Tile with Black Mastic	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
1-FT2-01-Floor Tile 412000722-0068	White Tile with Yellow Mastic	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
1-FT2-01-Mastic 412000722-0068A	White Tile with Yellow Mastic	Tan/Black Non-Fibrous Homogeneous		5% Ca Carbonate 93% Non-fibrous (Other)	2% Chrysotile
1-FT2-02-Floor Tile 412000722-0069	White Tile with Yellow Mastic	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
1-FT2-02-Mastic 412000722-0069A	White Tile with Yellow Mastic	Brown/Black Non-Fibrous Homogeneous	2% Cellulose	96% Non-fibrous (Other)	2% Chrysotile

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-CT-01 412000722-0070	Ceiling Tile	Gray/White Fibrous Homogeneous	50% Cellulose 25% Min. Wool	15% Perlite 10% Non-fibrous (Other)	None Detected
1-CT-02 412000722-0071	Ceiling Tile	Gray/White Fibrous Homogeneous	50% Cellulose 25% Min. Wool	15% Perlite 10% Non-fibrous (Other)	None Detected
1-CT-03 412000722-0072	Ceiling Tile	Gray Fibrous Homogeneous	50% Cellulose 15% Min. Wool	15% Perlite 20% Non-fibrous (Other)	None Detected
1-WG-01 412000722-0073	Beige Window Glazing	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-WG-02 412000722-0074	Beige Window Glazing	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
B-WBJC-01-Wallboard 412000722-0075	Wallboard and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
B-WBJC-01-Joint Compound 412000722-0075A	Wallboard and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
B-WBJC-02-Wallboard 412000722-0076	Wallboard and Joint Compound	Gray Non-Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
B-WBJC-02-Joint Compound 412000722-0076A	Wallboard and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
B-WBJC-03-Wallboard 412000722-0077	Wallboard and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
B-WBJC-03-Joint Compound 412000722-0077A	Wallboard and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
B-WBJC-04-Wallboard 412000722-0078	Wallboard and Joint Compound	Gray Fibrous Homogeneous	5% Cellulose 1% Glass	94% Non-fibrous (Other)	None Detected
B-WBJC-04-Joint Compound 412000722-0078A	Wallboard and Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
B-WBJC-05-Wallboard 412000722-0079	Wallboard and Joint Compound	Brown/Gray Fibrous Homogeneous	3% Cellulose 1% Glass	96% Non-fibrous (Other)	None Detected
B-WBJC-05-Joint Compound 412000722-0079A	Wallboard and Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
B-WBJC-06-Wallboard 412000722-0080	Wallboard and Joint Compound	Gray Fibrous Homogeneous	3% Cellulose 1% Glass	96% Non-fibrous (Other)	None Detected
B-WBJC-06-Joint Compound 412000722-0080A	Wallboard and Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
B-WBJC-07-Wallboard	Wallboard and Joint Compound	Gray Fibrous Homogeneous	4% Cellulose 1% Glass	95% Non-fibrous (Other)	None Detected
412000722-0081					
B-WBJC-07-Joint Compound	Wallboard and Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
412000722-0081A					
B-FT-01-Floor Tile	Floor Tile and Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
412000722-0082					
B-FT-01-Mastic	Floor Tile and Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
412000722-0082A					
B-FT-02-Floor Tile	Floor Tile and Mastic	Gray Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
412000722-0083					
B-FT-02-Mastic	Floor Tile and Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
412000722-0083A					
B-CT-01	Ceiling Tile	Gray Fibrous Homogeneous	5% Cellulose 80% Min. Wool	15% Non-fibrous (Other)	None Detected
412000722-0084					
B-CT-02	Ceiling Tile	Gray Fibrous Homogeneous	10% Cellulose 80% Min. Wool	10% Non-fibrous (Other)	None Detected
412000722-0085					
B-CT-03	Ceiling Tile	Gray/White Fibrous Homogeneous	10% Cellulose 90% Min. Wool		None Detected
412000722-0086					
B-PM3-01	Pipe Mastic	Tan Non-Fibrous Homogeneous	40% Glass 8% Wollastonite	5% Ca Carbonate 47% Non-fibrous (Other)	None Detected
412000722-0087					
B-PM3-02	Pipe Mastic	Tan Fibrous Homogeneous	3% Cellulose 15% Glass 6% Wollastonite	76% Non-fibrous (Other)	None Detected
412000722-0088					
R-01-Shingle	Roof Material and Felt	Gray/Tan/Black Fibrous Homogeneous	5% Glass	10% Quartz 15% Ca Carbonate 70% Non-fibrous (Other)	None Detected
412000722-0089					
R-01-Felt	Roof Material and Felt	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
412000722-0089A					
R-02-Shingle	Roof Material and Felt	Gray/Black Fibrous Homogeneous	5% Glass	10% Quartz 10% Ca Carbonate 75% Non-fibrous (Other)	None Detected
412000722-0090					
R-02-Felt	Roof Material and Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
412000722-0090A					
1-WC-01	Window Caulking	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
412000722-0091					
1-WC-02	Window Caulking	Beige Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
412000722-0092					

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Analyst(s)

Aaron Hartley (13)

Eric Loomis (2)

Lacy Searcy (75)

Sarah Breneman (48)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 01/27/2020 10:58:39



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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Attention: Craig Langford
Terracon, Inc.
1450 Fifth Street West
North Charleston, SC 29405

Phone: (843) 442-6658
Fax: (843) 884-9234
Received Date: 01/23/2020 11:40 AM
Analysis Date: 01/28/2020
Collected Date: 01/22/2020

Project: EN197470 M17 Old Barracks

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
3-PM2-03 412000722-0093	3rd Floor - Pipe Mastic	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-PM-03 412000722-0094	3rd Floor - Pipe Mastic	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-FT-03-Floor Tile 412000722-0095	Gray Floor Tile with Mastic	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-FT-03-Mastic 412000722-0096	Gray Floor Tile with Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-CM-03 412000722-0097	Yellow Carpet Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-CBM-03 412000722-0098	Cut Board and Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
2-DT-03 412000722-0099	Silver Duct Tape	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
2-FT-03-Floor Tile 412000722-0100	Beige Floor Tile and Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
2-FT-03-Mastic 412000722-0101	Beige Floor Tile and Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1-CBM-03- Cove Base 412000722-0102	White Cut Board and Mastic	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1-CBM-03-Mastic 412000722-0103	White Cut Board and Mastic	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1-DG-03-Tan Layer 412000722-0104	Door Gasket	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 01/29/2020 08:07:22



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10801 Southern Loop Blvd Pineville, NC 28134

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EMSL Order: 412000722

Customer ID: WPCE62

Customer PO: EN197470

Project ID:

Attention: Craig Langford
Terracon, Inc.
1450 Fifth Street West
North Charleston, SC 29405

Phone: (843) 442-6658

Fax: (843) 884-9234

Received Date: 01/23/2020 11:40 AM

Analysis Date: 01/28/2020

Collected Date: 01/22/2020

Project: EN197470 M17 Old Barracks

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
1-DG-03-Brown Layer 412000722-0105	Door Gasket	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1-FT2-03-Floor Tile 412000722-0106	White Tile with Yellow Mastic	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1-WG-03 412000722-0107	Beige Window Glazing	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
B-FT-03-Floor Tile 412000722-0108	Floor Tile and Mastic	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
B-FT-03-Mastic 412000722-0109	Floor Tile and Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
B-PM3-03 412000722-0110	Pipe Mastic	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
RO3-03-Shingle 412000722-0111	Roof Material and Felt	Gray/Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
RO3-03-Felt 412000722-0112	Roof Material and Felt	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1WC-03 412000722-0113	Window Caulking	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Derrick Young (21)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 01/29/2020 08:07:22

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Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

412000722

EMSL ANALYTICAL, INC.
10801 SOUTHERN LOOP BLVD
PINEVILLE, NC 28134PHONE: 704-525-2205
FAX: 704-525-2382

Company : Terracon		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 1450 Fifth Street West		Third Party Billing requires written authorization from third party	
City: North Charleston	State/Province: SC	Zip/Postal Code: 29405	Country:
Report To (Name): Craig Langford		Fax #:	
Telephone #: 843.442.6658		Email Address: craig.langford@terracon.com	
Project Name/Number: <u>EW 197470 M17 Old BRACKETS</u>			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order:	U.S. State Samples Taken: SC
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hours <input type="checkbox"/> 6 Hours <input type="checkbox"/> 24 Hrs <input checked="" type="checkbox"/> 48 Hrs <input type="checkbox"/> 3 Days <input type="checkbox"/> 4 Days <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days			
*For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)		TEM - Air <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 TEM - Bulk <input checked="" type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
		TEM- Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) Other: <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name: <u>Andrew Mikrohn</u>		Samplers Signature: <u>[Signature]</u>	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
3-PMZ-01	Pipe Mastic 3rd floor	1/200 L feet	1-22-20/10:00
3-PMZ-02	↓	↓	↓
3-PMZ-03	↓	↓	↓
3-PM-01	Pipe Mastic 3rd floor	2/200 L feet	/10:05
3-PM-02	↓	↓	↓
3-PM-03	↓	↓	↓
3-CT-01	white ceiling tile	3/3,000 sq ft	/10:10
3-CT-02	↓	↓	↓
Client Sample # (s):		Total # of Samples:	
Relinquished (Client): <u>Terracon</u>		Date: <u>1-22-20</u>	Time:
Received (Lab): <u>Kyle N</u>		Date: <u>1/23/20</u>	Time: <u>11:40AM Fk</u>
Comments/Special Instructions: *TEM NOB if PLM < 1% on all required materials 7909 9346 8420			

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING**Asbestos Chain of Custody**

EMSL Order Number (Lab Use Only):

412000722

Kernersville, NC 27284
PHONE: (336) 992-1025
FAX: (336) 992-4175

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
3-CT-03	white ceiling tile	3 / 3,000	↓ 10:10
3-DT-01	silver duct tape	4 / 200 ^{Sq. ft}	1-22-20 / 10:15
3-DT-02	↓	↓	↓
3-DT-03	↓	↓	↓
3-FT-01	Gray floor tile with mastic	5 / 150 ^{Sq. ft}	10:20
3-FT-02	↓	↓	↓
3-FT-03	↓	↓	↓
3-DWSC-01	Dry wall and joint compound	6 / 3,000 ^{Sq. ft}	10:25
3-DWSC-02	↓	↓	↓
3-DWSC-03	↓	↓	↓
3-DWSC-04	↓	↓	↓
3-DWSC-05	↓	↓	↓
3-CM-01	yellow carpet mastic	7 / 2,500 ^{Sq. ft}	10:30
3-CM-02	↓	↓	↓
3-CM-03	↓	↓	↓
2-CBM-01	cut board and mastic	8 / 200 ^{linear ft.}	10:35
2-CBM-02	↓ * Only test Mastic	↓	↓
2-CBM-03	↓	↓	↓
2-CT-01	Ceiling tile 2nd floor	9 / 4,500 ^{Sq. ft}	10:40
2-CT-02	↓	↓	↓
2-CT-03	↓	↓	↓
2-DT-01	Silver Duct tape	10 / 200 ^{Sq. ft}	10:45
2-DT-02	↓	↓	↓
2 2-DT-03	↓	↓	↓
*Comments/Special Instructions:			

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Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
Z-CM-01	yellow carpet mastic	11 / 3,000	1-22-20 / 10:50
Z-CM-02	↓	sq. ft ↓	↓
Z-CM-03	↓	↓	↓
Z-SF-01	gray sheet flooring and mastic	12 / 200	10:55
Z-SF-02	↓	sq. ft ↓	↓
Z-SF-03	↓	↓	↓
Z-FT-01	beige floor tile and mastic	13 / 1,000	11:00
Z-FT-02	↓	sq. ft ↓	↓
Z-FT-03	↓	↓	↓
Z-DWJC-01	Dry wall and Joint Compound	14 / 7,500	11:05
Z-DWJC-02	↓	sq. ft ↓	↓
Z-DWJC-03	↓	↓	↓
Z-DWJC-04	↓	↓	↓
Z-DWJC-05	↓	↓	↓
Z-DWJC-06	↓	↓	↓
Z-DWJC-07	↓	↓	↓
P1-01	wire bound plaster	15 / 2,500	11:10
P1-02	↓	sq. ft ↓	↓
P1-03	↓	↓	↓
P1-04	↓	↓	↓
P1-05	↓	↓	↓
P1-06	↓	↓	↓
P1-07	↓	↓	↓
P1-08	↓	↓	↓

*Comments/Special Instructions:

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Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
P1-09	wire bound plaster	15 / 2,500 sq. ft	11:10
P2-01	wood bound plaster	16 / 2,500 sq. ft	11:15
P2-02	↓	↓	↓
P2-03	↓	↓	↓
P2-04	↓	↓	↓
P2-05	↓	↓	↓
P2-06	↓	↓	↓
P2-07	↓	↓	↓
1-CBM-01	white cut board and Mastic	17 / 200 lin ft	11:20
1-CBM-02	↓	↓	↓
1-CBM-03	↓	↓	↓
1-DWJC-1	Dry wall joint compound	18 / 7,500 sq. ft	11:25
1-DWJC-2	↓	↓	↓
1-DWJC-3	↓	↓	↓
1-DWJC-4	↓	↓	↓
1-DWJC-5	↓	↓	↓
1-DWJC-6	↓	↓	↓
1-DWJC-7	↓	↓	↓
1-DG-01	Door gasket	19 / 25 lin. ft	11:30
1-DG-02	↓	↓	↓
1-DG-03	↓	↓	↓
1-FTI-01	tan tile with black mastic	20 / 3,000 sq. ft	11:45
1-FTI-02	↓	↓	↓
1-FTI-03	↓	↓	↓
*Comments/Special Instructions:			



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

412000722

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077

PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Time	Sample Location	Area	Material Description
1-FTZ-01	21-	11:50	Water Rte	1,000 sq. ft	white tile with yellow mastic
1-FTZ-02	↓	↓	↓	↓	↓
1-FTZ-03	↓	↓	↓	↓	↓
1-CT-01	22-	11:55		5,000 sq. ft	ceiling tile
1-CT-02	↓	↓	↓	↓	↓
1-CT-03	↓	↓	↓	↓	↓
1-WG-01	23-	12:00		200 lin. ft	large window glazing
1-WG-02	↓	↓	↓	↓	↓
1-WG-03	↓	↓	↓	↓	↓
B-WBSC-01	24-	12:05		5,000 sq. ft	wall board and joint compound
B-WBSC-02	↓	↓	↓	↓	↓
B-WBSC-03	↓	↓	↓	↓	↓
B-WBSC-04	↓	↓	↓	↓	↓
B-WBSC-05	↓	↓	↓	↓	↓
B-WBSC-06	↓	↓	↓	↓	↓
B-WBSC-07	↓	↓	↓	↓	↓
B-FT-01	25-	12:10		1,000 sq. ft	floor tile and mastic
B-FT-02	↓	↓	↓	↓	↓
B-FT-03	↓	↓	↓	↓	↓
B-CT-01	26-	12:15		1,500 sq. ft	ceiling tile
B-CT-02	↓	↓	↓	↓	↓
B-CT-03	↓	↓	↓	↓	↓
B-PM3-01	27-	12:20		1,000 sq. ft	pipe mastic
B-PM3-02	↓	↓	↓	↓	↓
*Comments/Special Instructions:					

Page 5 of 6 pages



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CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

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Sample #	HA #	Time	Sample Location	Area	Material Description
B-PM3-03	22	12:20		1,000 sq. ft	Pipe mastic
R-01	28	12:25		4,000 sq. ft	roof material and felt
R-02	--	↓		↓	↓
R-03	--	↓		↓	↓
I-WC-01	29	12:30		100 lin. ft	window caulking
I-WC-02	--	↓		↓	
I-WC-03	--	↓		↓	
18	--				
19	--				
20	--				
21	--				
22	--				
23	--				
24	--				
25	--				
26	--				
27	--				
28	--				
29	--				
30	--				
31	--				
32	--				
33	--				
34	--				
*Comments/Special Instructions:					

APPENDIX E
INSPECTOR CREDENTIALS

CRAIG C. LANGFORD

SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL – ASBESTO SECTION

CONSULTANT/PROJECT DESIGN – PD-00032_EXP 07/10/20
CONSULTANT/BUILDING INSPECTOR ASB-22775_EXP 07/09/20
AIR SAMPLER/MONITOR ASB-22599_EXP 07/08/20
SUPERVISOR SA-03094_EXP 07/08/20



SCDHEC ISSUED

Asbestos ID Card

Andrew Mitroka



SUPERAHERA	SA-03255	08/15/20
CONSULTBI	BI-01871	07/16/20
AIRSAMPLER	AS-00605	08/29/20

Expiration Date: